

REMARKS

Claims 1-13 are all the claims pending in the application. Claims 1-13 presently stand rejected. By this Amendment, Applicant amends claims 1, 6, and 13 to further clarify the invention. This amendments to claims 1, 6, and 13 are clearly supported throughout the specification *e.g.*, with respect to claim 1, *see* page 7, lines 5 to 7 of the specification (“In the case of a VoIP application...the data packets containing voice information”).

In addition, Applicant editorially amends claims 10 and 12 to cure minor informalities. Claim 11 is amended for conformity with the amendment made to claim 1.

Applicant also adds new claims 14-18. Claims 14-18 are clearly supported throughout the specification, *e.g.* page 7 of the specification.

Also, by this Amendment, Applicant adds FIGS 1 and 2 and amends the specification to refer to the figures. No new matter is being added.

I. Preliminary Matter

As a preliminary matter, Applicant thanks the Examiner for returning form PTO-1449 for the Information Disclosure Statement filed on September 4, 2001.

The Examiner, however, improperly crossed-out two of the references cited on the form PTO-1449. Applicant respectfully requests the Examiner to initial the appropriate boxes on the USPTO Form 1449A indicating that the cited references have been considered.

Applicant respectfully submits that all of the requirements for these references have been satisfied *i.e.*, the references were provided (*see* Image File Wrapper) and the concise explanation of relevance was provided (the foreign patent office communication, which should be available in the Image File Wrapper as NPL Document dated September 9, 2001).

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In particular, the Examiner should initial the references because the concise explanation requirement for foreign references under 37 C.F.R. § 1.98(a)(3) has been satisfied. The relevant portions of MPEP § 609 (page 600-122) states:

[w]here the information listed is not in the English language, but cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an "X", "Y", or "A" indication on a search report.

The provided copy of the foreign office communication with an English translation of the pertinent portions (X, Y, Z, and an explanation of what these letters stand for) is the concise explanation of relevance. As a result, it was improper for the Examiner not to initial the references.

Therefore, Applicant respectfully requests the Examiner to initial Form 1449 submitted with the Information Disclosure Statement filed on September 4, 2001.

II. Summary of the Office Action

The Examiner objected to the Drawings and the claims. In addition, the Examiner rejected claims 1-4 and 6-13 under 35 U.S.C. § 102(b) and claim 5 under 35 U.S.C. § 103(a).

III. Request for Drawings

The Examiner alleges that Drawings are required to facilitate the understanding of the invention to one of ordinary skill in the art (*see* page 2 of the Office Action). In view of the self-

explanatory amendment being made herein, Applicant respectfully requests the Examiner to withdraw this objection.

IV. Claim Objections

Claims 7, 10, and 12 are objected to because of informalities. It is appropriate and necessary for the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.

In addition, with respect to claim 7, Applicant respectfully requests the Examiner to withdraw this objection in view of the following comments. Initially, it is respectfully submitted that optional language is not improper, *see* MPEP § 2173.05(h)(III).

Moreover, it is respectfully submitted that the phrase "capable of" cannot be classified as being optional. There is no *per se* rule that would classify the noted phrase as optional language not carrying any patentable weight. MPEP § 2106.II.C requires:

Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) "adapted to" or "adapted for" clauses,
- (C) "wherein" clauses, or
- (D) "whereby" clauses.

This list of examples is not intended to be exhaustive (emphasis added).

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It is respectfully noted that the above recited language may only raise a question as to the limiting effect but there is no *per se* rule that the above noted language carries no patentable weight. Moreover, the phrase “capable of” is not on the list of examples.

Furthermore, it is respectfully submitted that the phrase “capable of” limits the structure of the control unit as claimed in claim 7. That is, it requires the structure of the control unit that is configured to execute the operations set forth in claim 7. In other words, it excludes devices that are incapable of performing operations set forth in claim 7. Accordingly, the phrase “capable of”, as set forth in claim 7, is not optional language and the Examiner should have accorded patentable weight to the features set forth in the claim. In addition, it is respectfully submitted that no rationale was provided to establish that the language “capable of”, as set forth in claim 7, is optional language.

For at least these exemplary reasons, it is respectfully requested that the Examiner withdraw this objection to claim 7 and accord proper patentable weight to the unique features set forth in the claim.

V. Claim Rejections under 35 U.S.C. § 102

Claims 1-3 and 9-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,815,660 to Momona (hereinafter “Momona”) and claims 4, 6-8, and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,963,557 to Eng (hereinafter “Eng”). Applicant respectfully traverses these rejections in view of the following remarks.

To be an “anticipation” rejection under 35 U.S.C. § 102, the reference must teach every element and recitation of the Applicant’s claims. Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus,

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the reference must clearly and unequivocally disclose every element and recitation of the claimed invention.

Claims 1-3 and 9-11

Claims 1-3 and 9-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,815,660 to Momona (hereinafter “Momona”). Of these rejected claims 1-3 and 9-11, only claim 1 is independent. Claim 1 requires, among a number of unique features: “interrupting the transmission of transmit authorizations from the second transmitting/receiving device to the first transmitting/receiving device when the data packet is received, wherein contents of the received data packet are unrelated to the interruption of the transmit authorizations.”

The Examiner asserts that claim 1 is directed to a method of transmitting data from the first device to the second device and is anticipated by the teachings of Momona. The Examiner maintains that Momona’s control signal to stop the polling transmitted from the slave station is equivalent to the data packets as set forth in claim 1 (*see* page 9 of the Office Action). Applicant respectfully disagrees with the Examiner.

In Momona, the master station stops transmitting the polling signals only when the contents of the signal received from the slave station is a request signal to stop polling. That is, in Momona, the signal received from the slave station is an explicit request to stop the polling (Fig. 4; col. 5, lines 5 to 14). That is, in Momona, the slave station has to transmit a special request to stop the transmission of the polling signals. In short, the master station of Momona will not stop transmitting the polling signals in response to a receipt of any signal but only in response to an explicit request to stop the polling.

Therefore, “interrupting the transmission of transmit authorizations from the second transmitting/receiving device to the first transmitting/receiving device when the data packet is received, wherein contents of the received data packet are unrelated to the interruption of the transmit authorizations,” as set forth in claim 1 is not disclosed by Momona, which only stops the transmission of the polling signals when an explicit request to stop the transmission of the polling signal is received from the slave station. For at least this exemplary reason, Applicant respectfully submits that independent claim 1 is patentably distinguishable from Momona. Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 1. Also, Applicant respectfully submits that claims 2, 3, and 9-11 are patentable at least by virtue of their dependency on claim 1.

In addition, claim 10 recites: “the second transmitting/receiving device automatically resumes the transmission of the transmit authorizations after a predetermined period of time, said transmission is resumed shortly before next data packet is expected to be sent from the first transmitting receiving device.” The Examiner alleges that col. 5, line 15 to 63 of Momona discloses automatic resumption of the polling signal (*see* page 5 of the Office Action). Applicant respectfully disagrees.

Momona discloses that to start the polling, a subscription polling signal is sent in order to make sure the polling can be started again. The subscription polling signal is broadcasted to all the slave stations without a specific address designation (Fig. 5; col. 5, lines 15 to 20). That is, in Momona, the transmission of the polling signals is not automatically resumed. On the contrary, in Momona each slave station has to indicate whether it wishes to receive the polling signal by responding to the subscription polling signal. Accordingly, Momona fails to teach or suggest the

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automatic resumption of the transmit authorizations, as set forth in claim 10. For at least this additional reason, Applicant respectfully submits that claim 10 patentably distinguishes from Momona.

Claims 4, 6-8, and 13

Next, the Examiner alleges that claims 4, 6-8, and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,963,557 to Eng (hereinafter “Eng”). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection in view of the comments, which follow.

Of these rejected claims 4, 6-8, and 13, only claims 4 and 7 are independent.

A. Independent claim 4 and its dependent claims 6 and 13

To begin, claim 4 requires, among a number of unique features:

wherein the first time period is shorter than a second time period which adjoins the first time period and in which no transmit authorizations are sent to the second transmitting/receiving device.

The Examiner asserts that claim 4 is directed to a method for sending transmit authorizations from the first device to the second device and is anticipated by the teachings of Eng.

Specifically, in response to Applicant’s arguments, the Examiner alleges:

Eng teaches an uplink channel that is divided into adjoined time slots (second time period) and mini time slots (first time period) as spoken of in column 4, lines 12-15, lines 24-24, and further disclosed in fig. 2. It is held that these teachings anticipate the limitations of claim 4, emphasis added (see page 9 of the Office Action).

Applicant respectfully submits that the Examiner is impermissibly modifying the language of the claim. Claim 4 recites: “a second time period which adjoins the first time period”. That is, claim

4 requires the second time period to be adjoined to the first time period, and not “adjoined regular time slots” as alleged by the Examiner.

Furthermore, there is no teaching or suggestion in Eng, how and what slots adjoin each other. The Examiner relies on col. 4, lines 12 to 15 of Eng, which recite: “[e]ach SS 50 compares the destination address of the received packets to its assigned address or to the group (multicast) addresses assigned to the multicast groups to which the SS 50 has subscribed.” The relevance of this passage is not understood. Moreover, col. 4, lines 24 to 25 of Momona recite “SSs 50 write control packets into mini-slots of the upstream channel UC and write payload packets into slots of the upstream channel UC.” Again, this quoted passage does not teach or suggest anything about the positioning of the packets *i.e.*, which packets are adjoined to each other. This quoted passage simply discloses that the two types of packets (col. 4, lines 18 to 23) are transmitted in different types of slots (col. 4, lines 24 to 26). In short, it has not been shown that the mini-slots and the regular slots adjoin each other.

In fact, Eng fails to teach or suggest which slots adjoin each other or whether they adjoin each other at all. It is simply not the focus of Eng’s teachings. In one embodiment of Eng’s invention, a separate channel for the mini-slots and a separate channel for the regular slots are provided (col. 11, lines 11, lines 8 to 14).

Therefore, “the first time period is shorter than a second time period which adjoins the first time period and in which no transmit authorizations are sent to the second transmitting/receiving device,” as set forth in claim 4 is not disclosed by Eng, which lacks disclosing the mini-slot adjoining the regular slot. For at least this exemplary reason, Applicant respectfully submits that independent claim 4 is patentably distinguishable from Eng. Applicant

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therefore respectfully requests the Examiner to withdraw this rejection of independent claim 4.

Also, Applicant respectfully submits that claims 6 and 13 are patentable at least by virtue of their dependency on claim 4.

In addition, claim 6 recites: “at least in a time slot of the second time period, transmitting authorizations to a third transmitting/receiving device.” As detailed above, Eng only teaches having an upstream channel split into mini-slots and regular slots but the control signals, *i.e.*, alleged authorization signals, are transmitted only in the mini-slots. Eng fails to teach or suggest transmitting authorizations in the regular slot, *i.e.*, the alleged second time period.

The Examiner alleges that Eng’s disclosure of the downstream direction having the control signals in time slots anticipates the unique features of claim 6 (*see* page 10 of the Office Action). Applicant respectfully submits, however, that, in the downstream direction, the packets are not transmitted from the device that also transmits to the second device in the mini slots. For at least this additional reason, Applicant respectfully submits that claim 6 is patentably distinguishable from Eng.

Also, claim 13 recites “the first transmitting/receiving device is a control center controlling the second transmitting/receiving device and wherein the second transmitting/receiving device is a terminal.” In Eng, the headend (alleged second transmitting/receiving device) controls the subscriber stations (alleged first transmitting/receiving device) and not vice versa. Furthermore, Eng discloses that the subscriber stations are data terminals (col. 2, lines 56 to 57) and not the control center, as alleged by the Examiner on page 7 of the Office Action. Moreover, Eng fails to teach or suggest the headend

being a terminal. For at least these additional reasons, claim 13 patentably distinguishes from Eng.

B. Independent claim 7 and its dependent claim 8

Next, independent claim 7, among a number of unique features, recites:

the control unit is capable of sending at least two transmit authorizations to the transmitting/receiving device and of interrupting the transmission of the transmit authorizations to the transmitting/receiving device as soon as the control center has received a data packet from the transmitting/receiving device.

The Examiner alleges that claim 7 is directed to a control center and is anticipated by Eng. The Examiner alleges that the unique features set forth in claim 7 are optional recitations and as such are not accorded patentable weight (*see* page 10 of the Office Action). As explained above (*see* § IV of this Amendment), the Examiner is respectfully requested to accord patentable weight to the features set forth in claim 7 or to substantiate the position that the features of claim 7 do not carry patentable weight.

Applicant respectfully submits that Eng's method of assigning time slots does not teach or suggest sending at least two authorization signals to the same device and interrupting the transmission of authorization signals as soon as the data packet is received from this device. In Eng, there is no transmission of at least two slot allocation control signals to the same device, one signal could clearly suffice. Moreover, in Eng, there is no interruption of the allocation control signals when a payload packet is received. Further, the head end 12 of Eng receives request control packets and not a payload packet (data packet).

Indeed, “the control unit is capable of sending at least two transmit authorizations to the transmitting/receiving device and of interrupting the transmission of the transmit authorizations to the transmitting/receiving device as soon as the control center has received a data packet from the transmitting/receiving device,” as set forth in claim 7, is not disclosed by Eng, which lacks having the controller sending at least two control signals to the transmitting device and interrupting the transmission of control signals as soon as a data packet is received from this device. For at least these exemplary reasons, Applicant respectfully submits that claim 7 is patentably distinguishable from Eng. Therefore, it is appropriate and necessary for the Examiner to withdraw this rejection of claim 7. Claim 8 is patentable at least by virtue of its dependency.

VI. Claim Rejections under 35 U.S.C. § 103

Claims 5 and 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Momona in view of Eng. Applicant respectfully traverses in view of the following comments.

Claims 5 and 12 depend on claim 1. Applicant has already demonstrated that Momona does not teach or suggest the unique features of claim 1 and that Eng also fails to teach or suggest at least some of the unique features of claim 7, which are analogous to the argued features of claim 1. That is, Eng does not cure the deficient teachings of Momona. Therefore, claim 1 is patentable over the combined teachings of Momona and Eng. Claims 5 and 12 are patentable at least by virtue of their dependency.

VII. New Claims

In order to provide more varied protection, Applicant adds claims 14-18.

Claim 14 is patentable at least by virtue of its recitation of: “sending a first data packet from the first transceiver to the second transceiver after receipt of the at least two send

authorizations, where the transmission takes place at a time derived from the at least two received send authorizations and where the transmission takes place at a low data rate, the low data rate being lower than the high send authorization rate; suspending transmission of send authorizations from the second transceiver to the first transceiver after receipt of the first data packet; and after the suspension of transmission and before a renewed transmission of at least two send authorizations from the second transceiver to the first transceiver, sending at least two send authorizations from the second transceiver to the third transceiver, where the transmission of the send authorizations from the second transceiver to the third transceiver is suspended as soon as a second data packet is received from the third transceiver in the second transceiver” and claim 15 at least by virtue of its dependency on claim 14.

Claim 16 at least by virtue of its recitation of: “after receipt of the at least two send authorizations, means for sending a first data packet to the second transceiver, where the transmission takes place at a time derived from the at least two received send authorizations, wherein the means for sending the first data packet executes the transmission at a low data rate, the low data rate being lower than the high send authorization rate” and claim 17 at least by virtue of its recitation of “wherein, after the suspension of transmission and before a renewed transmission of at least two send authorizations to the first transceiver, the second transceiver sends at least two send authorizations to the third transceiver and suspends the transmission of the send authorizations to the third transceiver as soon as the second transceiver receives a second data packet from the third transceiver.” Claim 18 is patentable at least by virtue of its dependency on claim 17.


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VIII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Nataliya Dvorson
Registration No. 56,616

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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AMENDMENTS TO THE DRAWINGS

Applicant adds FIGS 1 and 2 to depict an exemplary, non-limiting embodiments of the multiple access system and transmission method, respectively.

Attachment: One (1) New Sheet